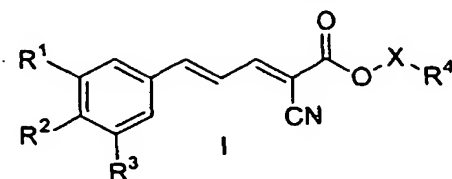


Claims:

1. A compound of Formula I, or a salt, solvate or hydrate thereof:



5 wherein

R^1 , R^2 and R^3 are each independently selected from H, OH, C_{1-6} alkyl, C_{1-6} alkoxy, NH_2 , $NH-C_{1-6}$ alkyl, $N(C_{1-6}alkyl)(C_{1-6}alkyl)$, SH, $S-C_{1-6}alkyl$, NO_2 , CF_3 , OCF_3 and halo;

R^4 is unsubstituted Ar, or Ar substituted with 1-4 substituents, independently selected
10 from C_{1-6} alkyl, C_{1-6} alkoxy and halo;

X is selected from $(CH_2CH_2O)_n$ and $(CH_2)_n$, and

$n = 1-4$.

2. The compound according to claim 1, wherein

R^1 , R^2 and R^3 are each independently selected from H, OH, C_{1-4} alkyl, C_{1-4} alkoxy,

15 NH_2 , $NH-C_{1-4}alkyl$, $N(C_{1-4}alkyl)(C_{1-4}alkyl)$, NO_2 , CF_3 , OCF_3 and halo;

R^4 is $C_{1-6}alkyl$,

X is $(CH_2CH_2O)_n$, and

$n = 1-4$.

3. The compound according to any of claims 1 and 2, wherein R^1 , R^2 and R^3 are
20 each independently selected from H, OH, $C_{1-4}alkyl$, $C_{1-4}alkoxy$, NH_2 , $NH-C_{1-4}alkyl$, $N(C_{1-4}alkyl)(C_{1-4}alkyl)$, NO_2 , CF_3 , OCF_3 and halo.

4. The compound according to claim 3, wherein R^1 , R^2 and R^3 are each
independently selected from H, OH, OCH_3 , NH_2 , $N(CH_3)_2$ and NO_2 .

5. The compound according to claim 4, wherein R^1 , R^2 and R^3 are each
25 independently selected from H, OH, and OCH_3 .

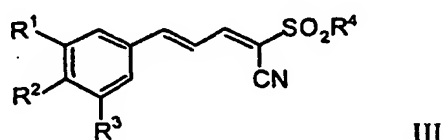
6. The compound according to claim 1, wherein R^4 is unsubstituted Ar.
7. The compound according to claim 6, wherein R^4 is phenyl.
8. The compound according to claim 2, wherein R^4 is methyl or ethyl.
9. The compound according to claim 8, wherein R^4 is methyl.
- 5 10. The compound according to claim 9, wherein n is 2-3.
11. The compound according to claim 10, wherein n is 3.
12. A compound selected from:
 - 2-Cyano-5-(4-hydroxy-3,5-dimethoxyphenyl)-penta-2E,4E-dienoic acid benzyl ester (CRIX-38)
 - 10 2-Cyano-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienoic acid benzyl ester (CRIX-39)
 - 2-Cyano-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienoic acid 2-[2-(2-methoxyethoxy)ethoxy] ethyl ester (CRIV-42)
 - 2-Cyano-5-(4-hydroxy-3,5-dimethoxyphenyl)-penta-2E,4E-dienoic acid 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (CRIV-46); and
 - 15 2-Cyano-5-(4-hydroxy-3-methoxyphenyl)-penta-2E,4E-dienoic acid benzyl ester (CRIX-79).
13. A composition comprising a compound according to any one of claims 1 to 12 in admixture with a pharmaceutically acceptable diluent or carrier.
14. A use of a compound according to any of claims 1-12, and/or a composition
20 according to claim 13, to prepare a medicament to modulate cell proliferation.
15. The use according to claim 14, for inhibiting cell proliferation.
16. The use according to claim 15, wherein the cell is a malignant hematopoietic cell.

17. A method of modulating cell proliferation comprising administering an effective amount of a compound according to any of claims 1-12, and/or a composition according to claim 13, to a cell or animal in need thereof.

18. The method according to claim 17, for inhibiting cell proliferation.

19. The method according to claim 18 wherein the cell is a malignant hematopoietic cell.

20. A compound of Formula III, and/or a salt, solvate, or hydrate thereof:



wherein

10 R^1 , R^2 and R^3 are each independently selected from H, OH, C_{1-6} alkyl, C_{1-6} alkoxy, NH_2 , $NH-C_{1-6}$ alkyl, $N(C_{1-6}$ alkyl)(C_{1-6} alkyl), SH, $S-C_{1-6}$ alkyl, NO_2 , CF_3 , OCF_3 and halo; and R^4 is selected from C_{1-6} alkyl, phenyl and pyridyl, wherein phenyl and pyridyl are unsubstituted or substituted with 1-4 substituents, independently selected from C_{1-6} alkyl, C_{1-6} alkoxy and halo, with the provisos that when R^1 and R^3 are both H and R^4 is unsubstituted phenyl, R^2 is not H, Cl, or OCH_3 ; when R^1 and R^2 are both H and R^4 is unsubstituted phenyl, R^3 is not NO_2 ; and when R^1 and R^3 are both H and R^4 is CH_3 , R^2 is not $N(CH_3)_2$.

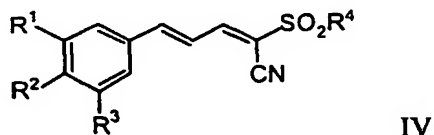
21. The compound according to claim 1, wherein R^1 , R^2 and R^3 are each independently selected from H, OH, C_{1-4} alkyl, C_{1-4} alkoxy, NH_2 , $NH-C_{1-4}$ alkyl, $N(C_{1-4}$ alkyl)(C_{1-4} alkyl), NO_2 , CF_3 , OCF_3 and halo.

22. The compound according to claim 21, R^1 , R^2 and R^3 are each independently selected from H, OH, OCH_3 , NH_2 , $N(CH_3)_2$ and NO_2 .

23. The compound according to claim 20, wherein R^4 is selected from C_{1-4} alkyl, phenyl and pyridyl.
24. The compound according to claim 23, wherein R^4 is selected from CH_3 and phenyl.
- 5 25. The compound according to claim 24, wherein R^4 is unsubstituted phenyl.
26. The compound according to claim 20, wherein phenyl and pyridyl are unsubstituted or substituted with 1-3 substituents, independently selected from C_{1-4} alkyl, C_{1-4} alkoxy and halo.
27. The compound according to claim 24, wherein phenyl is unsubstituted or
10 substituted with 1-2 substituents, independently selected from C_{1-4} alkyl, C_{1-4} alkoxy and halo.
28. The compound according to claim 20, wherein at least one of R^1 , R^2 and R^3 is OH while R^4 is selected from unsubstituted phenyl and phenyl substituted with 1-4 substituents, independently selected from C_{1-6} alkyl, C_{1-6} alkoxy and halo.
- 15 29. A compound selected from:
2-Benzenesulfonyl-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienenitrile (CRVIII-33),
2-Benzenesulfonyl-5-(4-hydroxy-3,5-dimethoxyphenyl)-penta-2E,4E-dienenitrile
(CRVIII-34),
2-Benzenesulfonyl-5-(4-nitrophenyl)-penta-2E,4E-dienenitrile (CRVIII-35),
20 5-(3,4-Dihydroxyphenyl)-2-(pyridine-2-sulfonyl)-penta-2E,4E-dienenitrile (CRVIII-
50),
2-(4-Chlorobenzenesulfonyl)-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienenitrile
(CRVIII-51),
5-(3,4-Dihydroxyphenyl)-2-(toluene-4-sulfonyl)-penta-2E,4E-dienenitrile (CRVIII-
25 52), and
5-(3,4-Dihydroxyphenyl)-2-methanesulfonyl-penta-2E,4E-dienenitrile (CRVIII-53).

30. A composition comprising a compound according to any one of claims 20 to 29 in admixture with a pharmaceutically acceptable diluent or carrier.

31. A composition comprising, in admixture with a pharmaceutically acceptable diluent or carrier, a compound of Formula IV, and/or a salt, solvate or hydrate thereof:

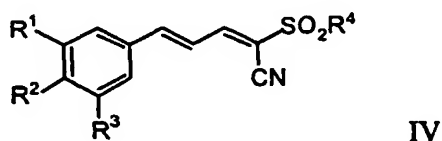


wherein

R^1 , R^2 and R^3 are each independently selected from H, OH, C_{1-6} alkyl, C_{1-6} alkoxy, NH_2 , $NH-C_{1-6}$ alkyl, $N(C_{1-6}$ alkyl)(C_{1-6} alkyl), SH, $S-C_{1-6}$ alkyl, NO_2 , CF_3 , OCF_3 and halo; and

R^4 is selected from C_{1-6} alkyl, phenyl and pyridyl, wherein phenyl and pyridyl are unsubstituted or substituted with 1-4 substituents, independently selected from C_{1-6} alkyl, C_{1-6} alkoxy and halo.

32. A use to prepare a medicament to modulate cell proliferation of a composition according to claim 30 or 31, and/or a compound capable of modulating cell proliferation of Formula IV, and/or a salt, solvate or hydrate thereof:



wherein

R^1 , R^2 and R^3 are each independently selected from H, OH, C_{1-6} alkyl, C_{1-6} alkoxy, NH_2 , $NH-C_{1-6}$ alkyl, $N(C_{1-6}$ alkyl)(C_{1-6} alkyl), SH,

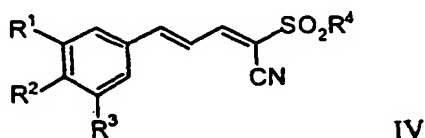
$S-C_{1-6}$ alkyl, NO_2 , CF_3 , OCF_3 and halo; and

R^4 is selected from C_{1-6} alkyl, phenyl and pyridyl, wherein phenyl and pyridyl are unsubstituted or substituted with 1-4 substituents, independently selected from C_{1-6} alkyl, C_{1-6} alkoxy and halo.

33. The use according to claim 13, for inhibiting cell proliferation.

34. The use according to claim 14 wherein the cell is a malignant hematopoietic cell.

35. A method of modulating cell proliferation comprising administering to a cell
5 or animal in need thereof an effective amount of a composition according to any of
claims 30 and 31, and/or a compound capable of modulating cell proliferation of
Formula IV, and/or a salt, solvate or hydrate thereof:



wherein

10 R^1 , R^2 and R^3 are each independently selected from H, OH, C_{1-6} alkyl, C_{1-6} alkoxy,
 NH_2 , $NH-C_{1-6}$ alkyl, $N(C_{1-6}$ alkyl)(C_{1-6} alkyl), SH,
 $S-C_{1-6}$ alkyl, NO_2 , CF_3 , OCF_3 and halo; and
 R^4 is selected from C_{1-6} alkyl, phenyl and pyridyl, wherein phenyl and pyridyl are
unsubstituted or substituted with 1-4 substituents, independently selected from
15 C_{1-6} alkyl, C_{1-6} alkoxy and halo.

36. The method according to claim 35, for inhibiting cell proliferation.

37. The method according to claim 36, wherein the cell is a malignant hematopoietic cell.